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OBSERVATIONS

ON THE

USE AND ABUSE

OF

MERCURY,

AND ON

THE PRECAUTIONS

NECESSARY

IN ITS EMPLOYMENT.



BY

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OBSERVATIONS, &c.

THE following Observations are addressed to the Public, with a view, on the one hand, to do away certain erroneous prepositions respecting the effects of Mercury, which impede the necessary employment of it; and on the other, to call its attention to the impropriety of an indiscriminate use of this medicine, by which much harm is often done, and the medicine itself brought into disrepute. The best way to effect these purposes seems to be, to make the public acquainted with what is really to be apprehended from an improper use of mercury, and the circumstances in which its bad effects shew themselves; by which every one may be enabled to distinguish these effects from such as proceed from other causes, as well as be warned against a use of this medicine which has become too prevalent.

Physicians will agree, that we do not possess a more valuable medicine than mercury.

cury. Not to mention the diseases for the cure of which it was first introduced, which, without its aid, almost uniformly prove fatal, and in which it is almost uniformly successful, we may appeal for the truth of this observation to its effects in some of the most dangerous forms of scrophula, in dropsies of different kinds, in inflammations, particularly chronic inflammations, and induration and enlargement of the different viscera.*

For many years after its introduction into practice, it was confined to a few diseases. At length it occurred to physicians, that a remedy, which in these proved so efficacious, might produce similar effects in other cases; and such has been the success of the

* If we except worm cases, in which mercury probably acts on the worms themselves, the various diseases in which mercury is useful, may perhaps be reduced to the two heads of inflammation and glandular obstruction. I believe there is nothing more erroneous than the opinion, that mercury will occasionally succeed in almost all diseases. This opinion has led to its employment in improper cases, and tended consequently to bring it into discredit. I have never found it successful except in the diseases here alluded to.

trial,

trial, that during the last twenty years mercury has been coming into general use, with a rapidity unequalled in the history of any other medicine. But the more we are assured of its value, the more cautious we ought to be in its employment; both because it is of the greater consequence to prevent any prepossession against it, and because we know that there is no active medicine which can safely be trifled with.

The prejudices which prevail against the use of mercury seem to arise from three sources; the nature of the complaints in which it was first employed; the uneasiness which even its salutary operation, when carried to a certain extent, necessarily occasions; and the bad consequences which sometimes attend an improper use of it. It is surprising, that the first of these causes should operate against its use; yet such is the confusion which naturally creeps into our ideas on subjects in which we are not habitually interested, that the prejudices of not a few originate from this cause. Of such a prejudice it is surely unnecessary to

say any thing. The other objections to the use of mercury are of more weight.

Like all other medicines which increase the secretion by the skin, the use of mercury tends to debilitate, and render the body more susceptible of cold. When mercury does not encrease any other excretion, the debility it occasions seems to be proportioned to the degree in which it promotes perspiration; and medicines which promote perspiration in a greater degree produce more sudden debility. We see a degree of weakness produced by the operation of James's powders, or of Dover's powders, (opium and ipecacuanha), in a few days which a moderate course of mercury would not occasion in many weeks.

Such is the tendency of mercury to promote the secretion by the skin, that it often runs off in this way almost as fast as it is received into the system, particularly on its first being used; so that it is sometimes difficult to make a sufficient quantity be retained to produce its desired effect. Some of the good effects of mercury seem, in a great measure, to arise from this action of it,

it, particularly its tendency to counteract the inflammatory disposition and to relieve actual inflammation.

This tendency of mercury readily accounts for the bad effects of taking cold under its influence. It is easy to conceive that the bad effects of checking perspiration will be most felt when, to use a common expression, the pores are most open, that is, when the secretion by the skin is most copious; for the greater the quantity of fluid thus discharged, the greater inconvenience is to be expected from suddenly checking its secretion. Hence also the danger of suddenly checking perspiration, when, by exercise or external warmth, it is rendered more copious than usual.

Such is the admirable constitution of our bodies, that means are provided for more or less successfully counteracting the operation of every thing which tends to injure them. If a thorn or any other extraneous body is introduced under the skin, inflammation and suppuration spontaneously arise, by which the offending cause is expelled. If a poisonous substance is received into the sto-

mach, the action of vomiting is frequently excited, or if it passes into the bowels, nature still endeavours to carry it off by an increase of the peculiar motion of the intestines, and of the secretion from their surface; so in the case before us, the morbid fullness which would in every instance arise, when perspiration suffers a check, is generally prevented by the sympathy which subsists between the skin and several other secreting organs, in consequence of which, as soon as a check is given to the action of the former, some one of the latter, which secrete a similar fluid from the blood, is called into more vigorous action, and what should have passed by the skin is thrown off by the kidneys or bowels, sometimes by the glands of the nose, throat, and lungs, occasioning what we call a *cold*.

This substitution of one excretion for another, if I may use the expression, is particularly apt to occur under the use of mercury, and seems to arise from the nature of this medicine being so stimulating that we cannot retain it in the system: if one vent is denied it, it quickly finds another.

Hence

Hence it is that people under the effects of mercury are so subject to an increased secretion from the kidneys and intestines, and from the glands of the mouth and throat.

It is of great consequence in most cases, in conducting a course of mercury, as much as possible to prevent its running off, and as we cannot wholly confine it, our plan is to direct it to that channel thro' which it passes off most slowly; for it is well known that this and some other medicines, while they particularly excite any one excreting organ, are not apt to pass off at the same time in considerable quantity by any other. Now the channel by which mercury passes off most slowly is the glands of the mouth, and fauces. Our view, therefore, is generally to direct it to this channel, and the degree in which it increases the secretion from these glands is a sufficiently accurate measure of the quantity of mercury in the body, as we generally find that the effects of mercury in removing disease are proportioned to the degree in which it affects the mouth. Besides the discharge, and consequently the debility, occasioned by the same quantity

quantity of mercury, is less when it excites these glands, than when it acts on the skin and bowels.

While it increases the secretion from the glands of the mouth and fauces, it irritates and inflames them, and the inflammation it excites when the quantity which passes in this way is great, often becoming considerable and spreading to neighbouring parts, much uneasiness is sometimes occasioned.

The symptoms of salivation form the chief of the bad effects, which are peculiar to this medicine. They are indeed unpleasant, but they are unattended with danger. It is rarely proper to induce them. A physician may practice for several years without meeting with one instance in which salivation is necessary; and the extent to which the older practitioners were accustomed on every occasion to carry the use of mercury, may be regarded as one of the greatest abuses which have opposed the beneficial employment of this medicine. It has certainly more than any other tended to confirm the prejudices against it. All its good effects can in most cases be obtained
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by slightly affecting the mouth, and keeping up this affection for a longer or shorter time, according as the complaint proves more or less obstinate.

In certain formidable cases which, we have reason to believe, if left to themselves would prove fatal, and in which more gentle means have failed, it is proper to induce salivation. But may not a similar objection be brought against the use of most other medicines? There are few whose operation is not attended with some inconvenience. How alarming would be the operation of an emetic were we not accustomed to see it! Violent vomiting is a symptom occasioned by some of the most fatal poisons, yet we are easily reconciled to it when assured of its beneficial tendency.

From what has been said, the reader will readily perceive, why a sudden salivation is often the effect of taking cold under the operation of mercury. We have no means of immediately checking a salivation. Discontinuing the use of the mercury, employing gentle laxatives, and avoiding every thing which tends to irritate the inflamed surface

surface of the mouth and fauces will lessen the inflammation and discharge, and by degrees remove them.

When the mercury instead of falling on the glands of the mouth and fauces, is thrown on the bowels in consequence of taking cold, it is more in our power to regulate and restrain the discharge. For the most part this affection of the bowels is a mere diarrhœa. The griping pains which sometimes attend it seem to arise from the copious secretion from the intestines washing off the mucus which is the natural defence against the irritation of their contents. When this affection is allowed to continue, and no care is taken to defend the bowels, dysenteric symptoms sometimes shew themselves; these are most frequently the consequence of mercury taken internally, as I shall presently have occasion more particularly to observe.

This affection of the bowels may be induced in another way. It will have nearly the same effect, whether the fluid, which should pass by the skin is thrown on the bowels in consequence of the action of the skin being checked by taking cold, or in consequence

consequence of this fluid being directed to the bowels by any cause of irritation applied to their surface. Hence it is, that indigestible and irritating food will often produce such a change in the distribution of the fluids, that the increased secretion by the skin or salivary glands, occasioned by the mercury, shall be exchanged for that by the bowels.

When the mercury is thrown on the kidneys it passes off, as by the skin, without uneasiness of any kind; and as in this case also, the only bad consequences are, that the mercury, instead of acting on the system for the cure of the disease for which it is given, is drained from the body, and the patient is sometimes weakened by the increased discharge. Mercury may, to a certain degree, be diverted from the kidneys by the use of certain astringent medicines. Those which direct it to the skin, by increasing the action of this organ, will divert it from the kidneys; but by this we should lose, not gain, as it is thrown off by the former more rapidly than by the latter.

In many cases the action of mercury on the kidneys is salutary, and our aim is as
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much as possible, by the use of diuretic medicines, to direct it to this channel; for it happens with respect to the kidneys, as with respect to the bowels, that whatever tends to irritate and increase the discharge from them, solicits the mercury to them. It is partly in this way that it often proves a cure in various species of dropsy.

As far as we have considered the effects of mercury, its debilitating tendency seems to arise from the evacuation it occasions. But it debilitates in another way, which has not been sufficiently attended to. Whatever weakens the stomach and bowels is soon felt in every part of the system, and even medical men, as far as I can judge, are not in general sufficiently aware of the bad effects which often arise from the internal use of mercury. To prescribe calomel, one of the most active preparations of this medicine, with the same freedom, and for the same purposes, as rhubarb or senna, is in my opinion altogether a misapplication of it.

Few things apply to the stomach and intestines a more hurtful irritation. I have often seen temporary dysentery induced by a
few

few doses of calomel, and I am convinced from many cases that its habitual or even occasional use as an aperient, however innocent it may seem at the time, seldom fails at length to debilitate the powers of digestion, and is often productive of still worse consequences. Calomel is frequently given to children because it has little taste, and may be given in small compass. But it is better to give a milder medicine, tho' a larger quantity may be required. Perhaps the smallness of the quantity in which it operates is of itself a sufficient objection, for there is no aperient which operates in very small quantity that operates mildly, as we might have foreseen, although the trial had not been made. For my own part, I know of few instances in which the internal use of mercury seems proper. There are some cases where powerful means are required to rouse the bowels to action, or a strong stimulus applied to their exhaling vessels is beneficial; and mercury is sometimes successfully employed internally for the removal of worms, but in ordinary cases we can surely with equal advantage use a less irritating medicine.

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When mercury is not employed as an aperient, but for the purpose of impregnating the system, what advantage is there in giving it by the mouth. It seldom happens that we cannot give as much as we wish by the skin. I have known many who were less debilitated by an ounce of mercury taken by the skin, than by half a dram received even in the smallest doses into the stomach.

In short, the objections to the use of mercury by the skin, seem all to resolve themselves into the two above treated of, the debility occasioned by an increase of some of the excretions, and a greater susceptibility to the effects of cold.* While there are the same objections to the internal use of mercury, there are far more weighty ones, which are not the less so, because we cannot

* It is unnecessary to notice a variety of groundless opinions, respecting the effects of mercury, which prevail among the vulgar, that it remains for ever in the system, causes a rottenness of the bones, &c. These are similar to the prejudices which prevailed respecting the bark for a long time after its introduction into practice, that it was formed into masses in the stomach and bowels, from which it could never be expelled ; that nobody survived the use of it more than seven years, &c.

with

with the same precision define them. All that we know of them is, that they chiefly consist in a debility of the stomach and intestines, which gives rise to the various dyspeptic complaints, flatulence, acidity, diarrhoea, and dysentery, effects which I have so often witnessed from the internal use of mercury, that I have for some years almost wholly abandoned it, except in the cases above alluded to.

The precautions suggested by what has been said will, I believe, in every instance, prevent the bad effects of mercury, with the exception of the symptoms of salivation, which it is now and then necessary to induce. It will be proper to take a cursory view of these precautions.

As by promoting the excretions, mercury tends to debilitate, it must be used with caution in weak habits, and its debilitating effects should be counteracted by the use of such strengthening medicines as are adapted to the case in which we employ it. The debilitating effects of mercury, however, are not such as many suppose. In a habit of ordinary strength, a moderate course

of mercury, properly conducted, produces little debility, and I have seen many under such a course recover both their strength and flesh. The mercury gives vigour, by removing the cause which impairs it. With caution there is no danger in making a trial of mercury in the most debilitated habit. In such the quantity first employed should be too small to produce any effect whatever. Let it be gradually increased ; if, as often happens, the strength improves, let it be continued ; if the strength be much impaired by it, it should be laid aside.

Nothing tends more to debilitate under the use of mercury, than the unfortunate idea, that the patient should be denied the advantage of free air and exercise. Under certain circumstances, confinement to the house is proper. When it is necessary to induce salivation, the patient should remain at home. The inconvenience, indeed, of going out is sufficient to prevent it. Under even the gentlest course of mercury, he should remain at home in damp cold weather, and after sun-set. With these exceptions, he should be as much in the open air as his strength will permit. It
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is not exposure to a cool, or even a cold air, that checks perspiration. In a dry cold air, with a due degree of exercise, the insensible perspiration is perhaps freer than under any other circumstances. All that is necessary with respect to temperature is, that it shall not be so low that the quantity of exercise, which the patient can take without inconvenience, shall not be sufficient to keep up a proper degree of heat.

All sudden changes of temperature, particularly that from warm to cold, (which, notwithstanding the refinements of some modern philosophers, may easily, I believe, be proved to be the most pernicious) are to be guarded against. The same may be said of partial exposure to cold. In short, it is not exposure to cold, but exposure to the causes of what we call taking cold, that is injurious to those under the use of mercury.

Strong exercises, I mean such as induce any degree of sensible perspiration, and all kinds of fatigue, are hurtful.

All indigestible and irritating articles of food should be avoided by those under the influence of mercury, both because it is proper, under the use of all medicines
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which promote the excretions, to avoid whatever debilitates, and because every thing that irritates the bowels tends to solicit a more copious secretion from them, and thus to divert the mercury from the channel, to which it is our aim to direct it. On this account much wine, strong and high seasoned food, and whatever tends to produce flatulence and acidity, are injurious.

The diet, however, should not be low, as was once recommended under the use of mercury, which, combined with the confinement, tended to produce the greater part of the debility attributed to the effects of the medicine. It should be nourishing, mild, and in some degree mucilaginous. Wine should be drank in preference to every other kind of fermented liquor. The stronger wines should be diluted. The quantity should be moderate, but proportioned to the patient's habits.

FINIS.